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TITLE Storm Water Pollution Prevention Plan
For The
Oxbow Corporate Park

ORIGINAL RELEASE DATE

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ABSTRACT

In 1987, amendments to the Clean Water Act of 1972 specified that those industrial facilities with the potential for the discharge of pollutants to the waters of the United States obtain a National Pollutant Discharge Elimination System (NPDES) permit. Section 402(p) sets NPDES storm water discharge permit guidelines for federal and state agencies. The Washington Department of Ecology (WDOE) is authorized to issue storm water permits to qualifying industries in the State of Washington. The NPDES and State Waste Discharge Baseline General Permit for Storm Water Discharges Associated with Industrial Activities (herein referred to as the NPDES Storm Water General Permit) permit number for the Oxbow Corporate Park facility is SO3-000149, dated January 6, 1993.

The NPDES Storm Water General Permit requires that each permitted site prepare and implement a Storm Water Pollution Prevention Plan (SWPPP). This plan must include an assessment of current site activities that may impact storm water and the specifications of new Best Management Practices (BMPs) for the prevention or treatment of storm water pollution.

KEY WORDS

storm water

Best Management Practice

site assessment

significant amounts

significant materials

pollution

risk

dumpster

TABLE OF CONTENTS

APPENDICES

REFERENCES

(1) *Developmental Center Spill Prevention Control and Countermeasures/Contingency Plan*, D658-10151-1.

(2) *Local Emergency Planning Committee Emergency Response Plan - Boeing Developmental Center,* D658-10137-1.

(3) *Boeing Defense and Space Group Hazardous Materials Emergency Response Plan,* D658-10026-1.

(4) *Hazardous Waste Management Plan,* D658-10043-1.

(5) *Hazardous Materials Management Plan*, D658-10109-1

(6) *Environmental Management Plan,* D658-10131-1.

(7) *Hazardous Waste Tank and Sump Management and Underground Storage Tank Plan-Developmental Center.*

(8) *Storm Water Management Manual for the Puget Sound Basin,* February, 1992.

(9) WAC 173-304
WAC 173-303

(10) 40 CFR 122

DEFINITIONS

Best Management Practices: Schedule of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control facility site run-off, spills or leaks, sludge or waste disposal, or drainage from raw material storage.

NPDES Storm Water General Permit: NPDES and State Waste Discharge Baseline General Permit for Storm Water Discharges Associated with Industrial Activities. The permit number for the Oxbow Corporate Park facility is SO3-000149, dated January 6, 1993.

Significant Amounts: amounts of pollutants that are amenable to treatment or prevention or that have the potential to cause or contribute to a violation of surface or ground water quality or sediment management standards.

Significant Materials: includes, but is not limited to: raw materials, fuels, materials such as solvents, detergents and plastic pellets, finished materials such as metallic products, raw materials used in food processing or production, hazardous substances designated under section 101(14) of CERCLA, any chemical the facility is required to report pursuant to EPCRA Section 313, fertilizers, pesticides, and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.

Site: land or water area where any "facility or activity" is physically located or conducted.

Storm Water: storm water run-off, snow melt run-off, and surface run-off and drainage.

Storm Water Drainage System: constructed and natural features which function together as a system to collect, convey, channel, hold, inhibit, retain, detain, infiltrate, or divert storm water.

ACRONYMS and ABBREVIATIONS

BD&SG - Boeing Defense and Space Group
BMP - Best Management Practice
CB - Catch Basin
CERCLA - Comprehensive Environmental Response, Compensation & Liability Act
CFR - Code of Federal Regulations
CMP - Corrugated Metal Pipe
EA - Environmental Affairs
EPA - Environmental Protection Agency
EPCRA - Emergency Planning and Community Right-to-Know Act
HAZMAT - Hazardous Material Emergency Response Team
HMMP - Hazardous Materials Management Plan
HWMP- Hazardous Waste Management Plan
HWTSP - Hazardous Waste Tank and Sump Management and Underground Storage Tank Plan
MEK - Methyl Ethyl Ketone
NPDES - National Pollutant Discharge Elimination System
PMI - Planned Maintenance Inspection
SARA - Superfund Amendment and Reauthorization Act
SWPPP - Storm Water Pollution Prevention Plan
WDOE - Washington Department of Ecology

1. CONTROL and DISTRIBUTION

The NPDES Storm Water General Permit requires that the SWPPP be retained on site and be made available to a representative of the WDOE upon request. A copy of this plan will be maintained at:

9-51 Building
9725 East Marginal Way South
Tukwila, WA 98108

All reports, certifications, or information required by the NPDES Storm Water General Permit SO3-000149 will be signed by an authorized representative, as specified in Section G20.A of the permit.

1.1 Revisions

Revisions will be performed as required by the NPDES Storm Water General Permit.

1.1.1 Plan Review and Updates

Modifications to the SWPPP will be made under the following conditions:

- An operational or structural change results in reduced effectiveness of the SWPPP.
- Upon notification by WDOE, or an authorized representative, that the SWPPP does not meet permit requirements.
- Inspection indicates that the SWPPP control measures are inadequate.

The SWPPP will be modified in accordance with guidelines outlined in Section S9.B.3.c of the NPDES Storm Water General Permit

The site map (section 3.1) will be modified whenever there is a change to existing facilities, drainage systems, operations, or any other modification to the site that may impact the potential for storm water pollution. The map will be modified whenever new information concerning drainage patterns is acquired.

1.2 Roles and Responsibilities

The SWPPP will be maintained and revised by the BD&SG Environmental Affairs organization. The biannual inspection (wet and dry seasons) will be the responsibility of the EA Team (Section 4.1.1). Implementation of Best Management Practices will be the responsibility of the Pollution Prevention Teams (Section 4.1.1). Routine inspections will be the responsibility of site personnel.

2. FACILITY LOCATION and GENERAL DESCRIPTION

Oxbow Corporate Park is located within unincorporated King County, Washington. The site address is:

10710 W. Marginal S
Seattle, WA 98168

The site consists of 31.41 acres leased by Boeing. Five separately identified buildings are located on the site. Of these buildings, the 7-250 and 7-253 Buildings are adjacent and form one contiguous structure. The 7-251 and 7-252 Buildings are connected by an elevated walkway. The 7-254 Building is a small security guard shelter on the east side of the facility at the entrance to the site. There is also a shed that serves as a staging area for hazardous waste. These structures are identified on the site map.

The site is estimated to be approximately 85 percent impervious, with some undeveloped property present. There is some landscaping adjacent to the buildings and around and within the parking areas. The developed portion of the site is surrounded by curbing, except for the main entrance located on the east edge of the site and an entrance (with a closed gate and currently not in use) located on the west edge of the property.

A retention pond that serves the site storm water drainage system is located to the south of the developed portion of the site. The pond is surrounded by undeveloped property with trees, shrubs, weeds, and grasses. This area can be considered non-regulated at this time with no development currently scheduled. The rest of the site, consisting of developed building areas, parking/storage areas, and transportation lanes, is considered regulated for storm water permit purposes. The parking areas could be considered non-regulated for storm water purposes if they were not being used on a frequent basis for equipment storage. Storage of metal equipment (scaffold-like structures, equipment support structures, and empty dumpsters and tub skids), metal raw materials, and other equipment and materials is frequent, especially in the parking lots located on the south, west and north edges of the site.

Facilities at the site support machine shop operations, some metals fabrication, small scale paint operations, office activities, and a significant amount of storage.

2.1 Storm Water Discharges

Except for a very small portion of the site, storm water from the developed, regulated portion of the site is collected by a conventional storm sewer system with catch basins and associated piping. Storm water collected by this system is discharged to the retention pond located to the south of the developed site. From the pond, water either percolates to ground water or is discharged directly to the Duwamish River, depending upon the volume of storm water. Precipitation on the minimal amount of landscaping in the developed portion of the site can percolate to groundwater. Precipitation on a portion of the entrances will drain to adjacent property. To the east this storm water will be collected by the storm water drainage system of the Boeing Developmental Center site. To the west the flow is into an undeveloped area. In both cases, the area of the Oxbow site causing such off-site flow consists of a couple of hundred square feet. Precipitation and run-off from the undeveloped and unregulated portions of the site can run into the Duwamish River through sheet flow or percolation.

2.1.1 Storm Drain System

Catch basins within the developed portion of the site collect storm water and discharge the water to the retention pond shown on the site map. A system of drain spouts and pipes collect storm water on the building roofs and direct the water to the storm water drainage system. There are no oil/water separators installed in the system.

2.1.2 Surface Water Drainage

The Duwamish River flows to the south of the site and is a major conveyor of surface water drainage in the area. It collects off-site drainage as well as run-off from the developed and undeveloped areas of the site.

Industrial activities occur in areas where impervious surfaces exist. Run-off associated with industrial activity is collected by the storm sewer system and discharged to the retention pond. Some of this water may percolate from the pond into the ground water prior to discharging into the Duwamish River. The portion of the precipitation from a storm event that will enter the groundwater is a function of the volume of water and the rate of precipitation.

2.2 Off-Site Drainage

There is no off-site run-on to the developed and regulated portion of the Oxbow Corporate Park site. There is an elevated drain located off-site at the north edge of the site (see site map). It is not likely that storm water drainage to this drain will occur at the present time.

3. POTENTIAL POLLUTANT SOURCE INVENTORY

The inventory of potential pollutants includes a narrative of those materials that may impact storm water and a site map that identifies structures, materials and potential pollutant source locations.

3.1 Site Map

Detailed site information, including drainage areas and potential pollutant information, are depicted on the site maps contained in Appendices A and B. These exhibits will be updated whenever alterations that may impact storm water are implemented.

3.1.1 Map Components

The site map includes the following:

- location of major structures, buildings, and paved areas,
- storm water drainage and discharge structures,
- outline of storm water drainage areas for each storm water discharge point,
- surface water bodies,
- location of areas of potential and actual pollutant contact,
- areas of existing and potential soil erosion,
- adjacent (off-site) areas of potential impact,
- storage tanks,
- waste management areas,
- areas of industrial activity with potential for storm water pollution.

Information used to prepare the site map includes site assessments by Environmental Affairs personnel, existing BD&SG drawings, Storm Water Pollution Prevention Team inputs, and consultant reports.

3.2 Industrial Pollutant Sources

The following pollutant inventory includes any activity or practice that may be a source of storm water pollution, including manufacturing, storage, waste handling, building processes, and transportation. The assessment was conducted by Environmental Engineering and included extensive site inspections and research of current and past practices and activities. A list of significant spills that occurred during the period beginning three years prior to the effective date of the permit and ending on the release date of this SWPPP is included.

The following sections detail the site assessment. Each section includes an assessment of the potential storm water pollution risk in that particular category.

3.2.1 Roof Contaminants

Air emissions from the heating and ventilation system, gas fired boilers and a diesel fueled emergency generator in the 7-253 Building, paint booths, and chemical mixing rooms exhaust to the roofs of the various buildings. Visual inspection of these air emission devices indicates no build up of emitted material from the air sources.

Air emission sources are serviced under the PMI system with service intervals varying between 1 month to 1 year depending on the individual piece of equipment.

There is some debris on the roofs from various maintenance and repair projects, including pipe insulating materials, used buckets of what appear to be either sealant or caulking products, roofing materials and wood.

There is a slow water drip from the heating/cooling unit located on the roof of the 7-251 Building. A rust colored stain pattern from this unit to the east edge of the roof indicates that some material is being deposited on the roof from this leak. The amount of material is not considered significant.

Roof contamination is considered to be a minor storm water pollution risk at this site.

3.2.2 Solid Waste Management

Metal tub skids, wooden dollies and some hopper-type dumpsters are utilized for disposal of non-hazardous waste. Most of these collection devices are located indoors. However; some of these tub skids, dollies and hopper dumpsters do not have covers and are located outdoors in uncovered areas. These uncovered and open devices collect rainwater during storm events, and depending on design and condition they do not leak. Therefore, the waste material is allowed to soak in the collected precipitation. As discussed next, this effluent becomes a significant storm water issue when the contents of the hopper dumpsters are centrally accumulated.

Refuse is centrally accumulated in two large huge-hauls located between the 7-252 and 7-250 Buildings on the west side of the site. The huge-hauls will receive solid and liquid wastes and accumulated rainwater when refuse from unprotected outdoor collection devices is dumped. The huge-haul design permits leakage; therefore, any liquid waste placed in them may leak onto the pavement and from there it may find its way to the storm drain system.

Metal chips stored in visqueen lined tub skids may be transported across the site and are temporarily stored outdoors before shipment to off-site reclamation. The tub skids are normally covered with visqueen when stored outdoors. Non-hazardous waste slurry from water jet operations are stored outdoors in drum containers. The containers are covered with visqueen when full. Empty containers are often left uncovered and collect rainwater.

Waste grease from cooking operations in the 7-250 Building are placed in a covered grease dumpster located in the parking area east of the Building. Grease is carried by hand bucket to the dumpster. Periodically an outside vendor pumps out the grease for disposal. Visual inspection shows the site of the dumpster to be clean.

Overall, solid waste management practices are considered to be significant storm water pollution risks at this site. However, the handling of metal chips and water jet slurry is considered to be a minor risk due to the infrequency of chip storage and the non-hazardous nature of the water jet slurry, as well as to the covering of containers when being used for storage.

3.2.3 Material and Equipment Storage

Equipment and non-hazardous industrial materials are stored uncovered on the property. Such storage includes vehicles such as tractor/trailers, non-hazardous metal stock and equipment, and some graphite composite and wood products. Other non-hazardous materials may be stored in bins, dollies or tub skids outdoors. On occasion, construction equipment such as backhoes or cranes are used on the site and are parked outdoors. This storage occurs in the parking areas on the south, west and north portions of the site. There was no observable leakage of lubricants or hydraulic fluids under or around stored equipment. There are some signs of rust in the parking areas.

Kirksite weights are stored on the west side of the site.

Overall, the storage of material and equipment at this site is considered to be a minor storm water pollution risk.

3.2.3.1 Surplus Storage

Tub skids, empty hopper dumpsters, dollies, trailers, and metal equipment such as manufacturing fixtures are stored in the parking areas located in the south, west and north portions of the site.

Of the various items outlined above, tub skids, dumpsters, and dollies are of most impact to storm water. Surplus hopper dumpsters and dollies collect rainwater that is eventually introduced to the storm drain system (see Section 3.2.2). Surplus tub skids that are stored outdoors are frequently not covered. These tub skids can contain residual material that will leach due to precipitation.

Most of the surplus equipment other than tub skids and dumpsters are considered to be minor storm water risks at this site. This equipment is normally constructed of steel and has little or no exposed lubricants that will leach due to precipitation. Surplus tub skid, dolly, and dumpster storage is considered to be a significant storm water pollution risk at this site.

3.2.4 Tanks and Drums

Industrial materials and byproducts, chemicals for use in industrial processes, and hazardous wastes and materials may be stored in tanks or drums.

3.2.4.1 Portable Tanks

There are no portable tanks permanently utilized on the site.

3.2.4.2 Oil and Gas Tanks

A diesel fuel tank is located inside the 7-253 Building. The tank has secondary containment. There is an outside fuel delivery station for the tank located on the north wall of the 7-253 Building, at the west end of the structure. The fuel fill pipe is enclosed in a metal box that contained some liquid material at the time of inspection. There did not appear to be any dripping from the containment box.

A propane tank, which poses no risk to storm water, is located outdoors west of the 7-252 Building.

Delivery of diesel fuel to this outside location is considered to be a moderate storm water pollution risk at this site.

3.2.4.3 Hazardous Waste Tanks and Drums

Solid and liquid hazardous wastes are accumulated in drums or smaller containers at collection stations inside of most buildings. There are no tanks used for hazardous waste accumulation at this site. These wastes are rigorously managed per the HWMP with liquid wastes held in areas with secondary containment. At this site, most waste is generated in the 7-250 and 7-252 Buildings.

The accumulation and storage of hazardous wastes at this site is considered to be a minor storm water pollution risk.

3.2.4.4 Hazardous Materials Tanks and Drums

Hazardous materials, both liquid and solid, are centrally stored and managed by Environmental Services personnel at the 9-04 Chemical Management Facility located at the Developmental Center site. Environmental Services delivers hazardous materials in user size containers (no larger than 55 gallons) to the using organizations at the Oxbow site. These materials are placed in fire department approved cabinets located within the buildings. Hazardous materials are not stored outside and unloading of deliveries occurs within the buildings or in protected areas. There is no tank storage of hazardous materials, other than the diesel fuel discussed in 3.2.4.2, at the present time.

Overall, hazardous materials tank and drum storage at this site is considered to be a minor storm water pollution risk.

3.2.5 Chemical Materials and Products

Chemicals such as solvents, adhesives, and coatings are used in manufacturing and maintenance. Storage of these chemicals is inside of the site buildings in accordance with company and regulatory requirements.

Water treatment chemicals are delivered and stored indoors at the 7-253 Building. Herbicides, insecticides, and rodenticides are applied on-site. Management of their usage is regulated by the site environmental staff with only Corporate approved chemicals being applied by fully trained and licensed personnel.

Overall, the storage of chemical materials and products at this site is considered to be a minor storm water pollution risk.

3.2.6 Fueling Stations

A propane station that is used by forklifts is located outdoors to the west of the 7-252 Building. Propane fueling operations are not considered to be a storm water pollution risk.

3.2.7 Material Handling

There is a covered loading dock at the southwest corner of the 7-252 Building. In general, there are few covered load/unload areas with the exception of the 7-252 Building. However, most buildings do have one or more large roll-up doors that permit a significant amount of loading and unloading to be performed indoors, reducing storm water pollution risks.

Materials used in indoor manufacturing and service processes that may be transported across the site can frequently include the following:

- Solvents, adhesives, coolants, and coatings are used in indoor painting operations, composite fabrication, and other manufacturing activities. Paints are infrequently used outdoors during building maintenance. Materials are also used in conjunction with welding activities

- Acids and alkalis are used in closed-loop boiler or chiller water treatment.

- Petroleum and lubricating products are used indoors in shops and manufacturing processes or are used indoors to service vehicular equipment.

Material handling activities are considered to be moderate storm water pollution risks.

3.2.8 Hazardous Waste Handling

Solid and liquid hazardous wastes are accumulated in closed containers at indoor waste collection stations. These are managed according to the HWMP. All containers are handled by specially trained Environmental Services personnel and are transported, by covered vehicle, to the hazardous waste sheds to the west of the 7-252 Building for central accumulation. At times, banded, palletized drums will be moved by forklift. The sheds provide secondary containment features, but do not have a covered load/unload area.

The handling of hazardous waste at this site is considered to be a moderate storm water pollution risk.

3.2.9 Transportation

Raw materials and hazardous materials are transported onto and within the site. Access to the site is located on the east side by the 7-254 Building. This Building is a security post and is manned whenever the gate to the site is open. The central transportation corridor is the lane between the 7-250 and the 7-251 and 7-252 Buildings. Significant chemical transport occurs to and from the 9-04 Building at the Developmental Center site. There is hazardous waste transport from manufacturing areas to the hazardous waste sheds west of the 7-252 Building.

Food preparation occurs at the 7-250 cafeteria. Food and cooking supplies are delivered to the loading area on the east side of the 7-250 Building, and prepared food is taken by truck from the 7-250 Building to other Boeing cafeterias at other sites. A grease dumpster located east of the 7-250 Building is used for storing grease. The grease is picked up and transported off-site by outside vendors.

Materials for storage indoors or outdoors may be transported on-site by flatbed trucks or other vehicles and loaded or unloaded both indoors and outdoors by forklift or by personnel. Most of the transportation will be by company vehicle, but some deliveries are made by outside vendors.

Transportation of material and wastes on the site is considered to be a significant storm water pollution risk.

3.2.10 Vehicle Maintenance and Cleaning

There are no large scale automotive operations at this site. Infrequent vehicle repair and maintenance can occur outdoors when equipment fails. There is no washing of vehicles at this site.

Vehicle maintenance and cleaning activities at this site are considered to be a minor storm water pollution risk.

3.2.11 Dust and Particulate Generators

There are no specific outdoor operations that generate dust or particulates.

Operations within the 7-250 and 7-252 Buildings generate dust and particulate matter. These substances are extracted either by means of outdoor baghouse systems or by filtering of plant air through the ventilation system. No materials were observed on the roofs, indicating that the ventilation filters are controlling the dust and particulate matter in the plant air. Several of the baghouses had small accumulations of particulate matter or metal filings outside of containment. This material would be exposed to precipitation during a storm event.

Dust and particulate generation activities at this site are considered to be moderate storm water pollution risks.

3.2.12 Non-Storm Water Discharges and Pollutants

Non-storm water discharges on occasion include dewatering for construction projects. There is only infrequent dewatering activity at this site. Infrequent flushing of municipal water from fire sprinkler systems occurs.

Non-storm water discharges at this site are considered to be a minor storm water pollution risk.

Refer to Appendix C for the Non Storm Water Discharge Assessment and Certification.

The following is a list of Non-Permitted Discharges that will be periodically checked for its impact on storm water:

Fire Check System Discharge
Condensate
Landscape Irrigation Lines
Drinking Water Lines

3.2.13 Construction (Less Than 5 Acres)

There is infrequent outdoor construction.

Construction activities, when they occur, and their storm water pollution risk depend on the size, location and type of activity.

3.2.14 Outdoor Industrial Activities

There are no special outdoor industrial activities taking place on this site.

3.2.15 Past Spills and Leaks

The potential for pollutants to be present in storm water is lessened by the SPCC (Reference (1)). However, for those incidents that do involve spills of hazardous materials, 40 CFR 110, 40 CFR 117, 40 CFR 302, and WAC 173-303 provide guidelines for reporting requirements of spills in significant amounts. A list of spills covering the period beginning three years prior to the effective date of the permit and ending on the release date of this SWPPP is included in Appendix D.

3.3 Summary

Storm water pollution risk from all areas is generally minor. Specific significant risks are summarized in Section 3.3.2.

3.3.1 Significant Materials Monitoring Requirements

A significant chemical used, treated, or stored in a significant amount is defined as those chemicals regulated per section 313 Title III of (SARA), and section 101(14) of (CERCLA). The threshold for reporting requirements for these chemicals are defined per the applicable regulation. For a toxic chemical regulated by SARA, 10,000 pounds is the reportable amount; for those chemicals regulated per CERCLA the threshold for the reporting amount varies. For the period beginning three years prior to the effective date of the permit and ending on the release date of this SWPPP no chemicals exceeded the SARA thresholds. Refer to Appendix E for information on CERCLA Chemicals.

3.3.2 Storm Water Pollution Risk Summary

The significant storm water pollution risks observed at the site during the assessment are outlined as follows:

- Hopper dumpsters at the site are located outdoors and are not covered or provided with lids. These dumpsters are typically sealed and accumulate appreciable amounts of rainwater. Solid waste in the hopper dumpsters then will soak in the accumulated precipitation. The hopper dumpsters are then emptied into large huge-hauls. The huge-hauls are not sealed and the accumulated precipitation and other liquid wastes will leach through the solid waste in the huge-haul, leak out the bottom, and will run to the storm drain.

- Tub skids, dollies and dumpsters are stored outside in the parking areas. These devices are stored in an uncovered situation and any residual materials in the tub skids will be exposed to precipitation. Leaching of residual contents can then occur in the run-off.

- Vehicular traffic, including private and company vehicles, and forklifts pose the risk of leaks of fluids such as fuels, lubricants, and coolants. Forklifts can be a source of hydraulic leaks which are common around heavy lift equipment. There is some risk of spillage and leakage from chemical material and waste transport on the site.

4. BEST MANAGEMENT PRACTICES

BMPs mean schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce pollution to waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs are further categorized as operational, source control, erosion and sediment control, and treatment.

Throughout this section on BMPs, there are references to the *Storm Water Management Manual for the Puget Sound Basin (SWMM)*. These references are for information and guidance, and the provisions of the SWMM are not considered mandatory for purposes of this SWPPP.

4.1 Operational Best Management Practices

Operational BMPs mean schedule of activities, prohibition of practices, maintenance procedures, employee training, good housekeeping, and other managerial practices to prevent or reduce the pollution of waters of the State.

4.1.1 BD&SG Storm Water Pollution Prevention Teams (S9.D.2.a.i)

The BD&SG Storm Water Pollution Prevention Teams consist of an Environmental Affairs (EA) Team and Site Team. The overall purpose of these teams is to gather the information needed to develop, write and maintain the SWPPP and implement the goals stated in the plan.

The EA Team includes Environmental Affairs personnel from the Boeing Space Center, Developmental Center, Electronics Center, and Central Engineering. The responsibility of this team is to oversee, develop, and implement the storm water program. They will also be responsible for the wet and dry season inspections.

Team Members	**Location**	**Phone #**	**Role**
Denis Bourcier	DC	544-0350	Duwamish Corridor Water Focal
Dave Sizemore	Space Center	773-3528	Space Center Water Engineer
Gordon Ware	Electronics	657-9461	Electronics Water Engineer
Peter Weickmann	DC	544-1224	BD&SG Water Focal
Larry Weinberg	DC	544-6120	Support

The Oxbow Corporate Park Site Team consists of representatives of the following organizations or functions:

Organizations/Function	**Location**	**Phone #**
DC Water Focal	DC	544-0350
Material Handling	DC	544-1252
Plant Engineering	DC	544-2938
Plant Services	DC	544-2918
Layout	DC	544-2563
Planning	DC	544-2883
GCU	DC	544-2921
Envir. Support Services	DC	544-1771

Additional organizations are consulted and/or added as needed. The DC Water Focal on the team is responsible for conducting the site meetings.

The team members in conjunction with the EA team are responsible for developing lists of potential storm water pollutants and existing BMPs. Once pollutant sources have been identified the team will develop BMPs to address these concerns. Solutions may require modifying existing BMPs or developing new BMPs. Once finalized, members will aid in implementation, on-going compliance, and site inspection.

4.1.2 Good Housekeeping Practices (S9.D.2.a.ii)

"Good Housekeeping" is considered the periodic/scheduled maintenance and cleanup, as appropriate, of areas which may contribute pollutants to storm water discharges.

4.1.2.1 Maintenance of Storm Drainage Facilities

Proper maintenance of storm water facilities is necessary to insure they serve their intended function. The following guidelines will be adhered to:

1) The storm water system will be inspected on a regular basis.

2) Any deterioration threatening the structural integrity of the system will be repaired.

For additional guidance, refer to Section IV - 4.10 BMP S2.00 Maintenance of Storm Drainage Facilities (page IV-4-25) of Reference (8). The following sections describe the maintenance and cleaning activities that will be implemented for the Oxbow Corporate Park storm drainage facilities.

4.1.2.1.1 Catch Basins

Cleaning of catch basins aids in the removal of debris that contain potential pollutants or inhibit the function of the basin. For additional guidance, refer to Table III-2.10 Maintenance of Control Structures and Catch basins (page III-2-67) of Reference (8). The following guidelines will be adhered to concerning catch basins:

1) Basins will be cleaned annually (before October 15) or more frequently depending on the location, the activity taking place, and the accumulation of debris.

Note: Deposits equal to or greater than one-third the depth from the basin to the invert of the lowest pipe into or out of the basin will be cleaned out.

2) Debris will be regularly removed from the surface of basins.

3) Warning signs, such as "dump no waste - drains to stream", will be painted adjacent to all storm drain inlets, where conditions allow.

4) Employees will be encouraged to notify Plant Services of clogged or obstructed drains.

4.1.2.1.2 Oil/Water Separators

Oil/Water separators must be cleaned frequently to keep accumulated oil from escaping during storms. They must always be cleaned by October 15 to remove material that has accumulated during the dry season. In addition:

1) The separators shall be inspected at least monthly.

2) Oil absorbent pads are to be replaced as needed but shall always be replaced in the fall prior to the wet season and in the spring.

3) The effluent shutoff valve is to be closed during cleaning operations.

4) Waste oil, standing water, and debris shall be disposed of properly (refer to section 4.1.2.4).

4.1.2.2 Street Sweeping

Street Sweeping refers to the removal of accumulated dust, dirt, and debris from impervious surfaces (i.e. transportation corridors, parking areas, storage areas, etc.) with the use of mechanical cleaners. For those areas that are not accessible by mechanical sweeping it may be necessary to use hand held equipment. For additional guidance, refer to Section IV - 4.12 BMP S2.20 Street Sweeping (page IV-4-27) of Reference (8). The following should be done to increase the efficiency of site sweeping activities:

1) Increase the frequency of sweeping operations in high pollutant loading areas. The EA team will work with site personnel to develop a rough map of where these areas are at the Oxbow Corporate Park.

2) Where possible, increase the number of passes.

3) Where possible, increase the number of weekly passes.

4) Operators should be trained to maximize sweeper performance.

4.1.2.3 Sweeping Inside Manufacturing Areas

Inside manufacturing activities that generate waste by-products (metals chips, sanding by-products, etc.) should have a program that regularly sweeps these areas. Transferring these products outside whether by vehicle, foot, or other means is a potential source of storm water pollution. Such a program may involve either mechanical or hand sweeping.

4.1.2.4 Disposal of Liquids and Sediments from Maintenance Activities (S10)

Maintenance of storm drainage facilities will be done in compliance with any local ordinances for the disposal of liquids or sediments. Some of the highlights of those ordinances are:

- No liquids are to be decanted into storm water systems defined as sensitive by local government.

  Note: No liquids will be decanted into storm water systems located on BD&SG property without prior approval of site Environmental Water Focal.

- Decant stations must be used where available.

Note: Where possible BD&SG will set-up its own decant station (settling tank) and discharge contents to METRO.

- A lined landfill (Cedar Hills) should be used when disposing of solids from cleaning basins in industrial areas.

4.1.2.5 Surplus Equipment and Material

A good housekeeping practice for surplus equipment and material storage areas is the continual removal of accumulated/unused debris, parts, equipment, test structures, scrap metal, and other material. Every effort should be made to find temporary storage inside as opposed to outside.

4.1.2.6 Cleaning and Maintenance Schedule

The following schedule are minimum requirements, activities may vary depending on the conditions:

Activity	**Schedule**	**Responsibility**
Oil/Water Separators	Annual (before Oct. 15)	Facilities (Envir. Services)
Catch Basins	Annual (before Oct. 15)	Facilities/Vendor
Street Sweeping	Twice a week	Facilities
Sweeping Inside Mfg. Areas	Twice a week	Facilities/Manufacturing
Surplus Storage Areas	Regular basis	Facilities
Raw Material Storage Areas	Regular basis	Facilities

4.1.3 Preventive Maintenance (S9.D.2.a.iii)

Boeing has in place a Planned Maintenance Program which is a system of regularly scheduled inspections and routine service.

4.1.3.1 Planned Maintenance Inspection Program

The PMI Program includes periodic inspections, minor repairs and overhauls of industrial equipment, and other actions performed on a periodic basis. Job orders are submitted to a coordinator who then enters the job into a computer. During the appropriate week job cards are printed and distributed to the personnel responsible for completing the task. Completed jobs are returned to the supervisor with comments. The supervisor submits them to the coordinator for historical record. This program will be used for meeting the requirements set forth in this plan.

4.1.4 Spill Prevention and Response Procedures (S9.D.2.a.iv)

Spill prevention and response procedures are addressed in a number of regulatory documents maintained by Environmental Affairs (References (1) - (6)). These plans have been implemented and are updated when changes occur. **As highlighted in these plans, Ecology and the local Sewer Authority, among other agencies, shall be notified immediately if any regulated spill reaches the sanitary or storm sewers, or surface waters.** For additional guidance, refer to Section IV-4.8 BMP S1.80 Emergency Spill Cleanup Plans (Page IV-4-21) of Reference (8).

4.1.4.1 HazMat

Boeing Defense and Space Group maintains Hazardous Materials (HazMat) response teams at all major sites. These teams are trained and outfitted to "level A" response capability. Team

members are normally available on-site during first and second shifts Monday through Friday and are available on an "on-call" basis at other times. In addition, the Boeing Fire Department has staff on duty twenty four hours a day, seven days a week, also with "level A" capability. They are always available as back-up for the site teams. The site HazMat teams are well equipped to respond quickly and efficiently. They can be dispatched at any time by either hand-held radio or pager. Dedicated HazMat response vehicles are stationed at strategic locations for immediate use in case of a chemical emergency.

4.1.5 Employee Training (S9.D.2.a.v)

The following sections are in response to the requirements of the referenced WDOE General Permit.

4.1.5.1 Storm Water Pollution Prevention Training

Training will be addressed on the following three fronts:

1) Employees that are directly responsible for ensuring compliance with sections of the SWPPP will receive on-the-job-training (OJT). This training will be conducted on a yearly basis or as changes occur to the SWPPP.

2) In addition, an existing BD&SG course (i.e. Hazardous Communication/First Responder Awareness - 2X9711.3) will be used to train employees on the SWPPP and storm water pollution prevention. This particular course already targets all personnel that come in contact with or handle hazardous waste or materials.

3) An employee awareness program will be launched explaining storm water pollution prevention activities. This will be conducted through BD&SG media.

4.1.5.2 Other Training

Other training pertinent to storm water pollution prevention is included in references (1), (2), (4), (5), and (6).

4.1.6 Inspection and Record keeping (S9.D.2.a.vi)

The following sections discuss the inspection, report and record keeping requirements of the SWPPP.

4.1.6.1 Inspections (S6.A)

The EA team will conduct the wet and dry season inspections as outlined in the permit, following the procedures contained in the SWPPP Inspection Environmental Engineering Operating Instruction (EEOI).

4.1.6.2 Reports (S6.C.1 & 2)

Biannual inspection reports shall consist of the following:

- Scope of the inspection,
- Personnel conducting the inspection,
- Date(s) of inspection,
- Major observations, and
- Actions taken.

Refer to Appendix F for a draft format of this report. These reports shall be retained in the Environmental Engineering area in the 9-51 Building.

4.1.6.3 Record keeping (S6.C.3)

All records, including inspections, spill reports, correspondence, etc., concerning storm water management issues will be kept at the following location:

9-51 Building
9725 E. Marginal Wy S
Tukwila, WA 98108

The SWPPP and all records will be kept at least five years from the date of the report or submission.

4.2 Source Control BMPs

Source Control BMPs mean physical, structural or mechanical devices or facilities that are intended to prevent pollutants from entering storm water.

4.2.1 Fueling Stations (S9.D.2.b.i)

There are no fueling stations located on the Oxbow Corporate Park site.

4.2.2 Vehicle/Equipment Washing and Steam Cleaning (S9.D.2.b.ii)

Vehicles and equipment are not washed at the Oxbow Corporate Park site.

Note: Vehicle wash water is considered process waste water and any washing operations may require an NPDES process permit.

4.2.3 Loading And Unloading Liquid Materials (S9.D.2.b.iii)

Materials spilled, leaked, or lost during loading/unloading may collect in the soil or on other surfaces and be carried away by runoff or when the area is cleaned. For additional guidance, refer to Section IV - 4.3 BMP S1.30 Loading and Unloading Liquid Materials (page IV-4-6) of Reference (8).

The Developmental Center 9-04 Building centralizes the delivery and distribution of all hazardous materials. It also facilitates the handling of hazardous waste generated at the site. Provisions have been made to minimize the contact that loading/unloading operations have with storm water. All materials are delivered to an inside receiving area which has a "dry" sump that can only be released to storm water after it is inspected and manually opened by personnel. In addition, the site is designed to prevent run-on of storm water.

Materials at this stage are segregated, in some cases placed in suitable containers or placed in smaller, easier to handle containers and then delivered to the using organizations by trained personnel. Where feasible secondary containment is provided during delivery. Site loading/unloading facilities will be evaluated based on usage. If specific areas are heavily used, then appropriate provisions (dock with door skirt, inside delivery, etc.) will be implemented.

References (1), (4) and (5) are the applicable plans for loading and unloading of liquid materials.

4.2.4 Liquid Storage in Above Ground Tanks (S9.D.2.b.iv)

There are no outside above ground tanks on the Oxbow Corporate Park site.

4.2.5 Solid Waste Management (S9.D.2.b.v)

The following sections describe the practices that will be implemented to minimize contamination of storm water from solid waste management practices. All personnel involved in solid waste management will be properly trained. For additional guidance, refer to Section IV - 4.5 BMP S1.50 Container Storage of Liquids, Food Wastes or Dangerous Wastes (page IV-4-13) of Reference (8).

4.2.5.1 Central Accumulation of Solid Waste

Central accumulation of solid waste will be accomplished by compactors or similar solid waste collection process. If compactors (which will replace huge-hauls) are used the following guidelines will apply:

- Compactors will be sealed so that effluent will not leak out and storm water will not leak in.
- Compactors will be inspected regularly to insure that they are mechanically and structurally sound and being properly used.
- Leaky, damaged, non-operational compactors will be repaired or phased out as required.
- If inspections indicate that additional provisions (secondary containment, covered structure, etc.) are required to minimize storm water contact with waste handling operations than these will be implemented as needed.

4.2.5.2 Dumpsters

Dumpsters with proper waste containment features and proofing against storm water influx will replace all 5 x 5's, tub skids, and nonfunctional dumpsters used for solid waste management purposes.

- All dumpsters will be sealed so that effluent will not leak out. Dumpsters will have waterproof covers to prevent accumulation of precipitation. Such covers will be secured when loading/unloading is not occurring.
- Dumpster loading and unloading practices will be conducted such that spillage will not occur.
- All dumpsters will be inspected regularly to insure that proper practices are being followed.
- Liquid waste will not be disposed of in dumpsters unless it can be properly secured to prevent leakage (i.e. liquid waste will not be poured directly into dumpsters).
- Leaky, damaged, non-operational dumpsters will be repaired or phased out.

4.2.6 Outside Storage Of Raw Materials or By- or Finished Products (S9.D.2.b.vi)

The storage of outside materials will be confined to the fewest number of areas. Every effort will be made to set each area up in the most compact fashion and each will be selected to minimize the storm water impact on the Oxbow Corporate Park. For additional guidance, refer to Section IV - 4.6 BMP S1.60 Outside Storage of Raw Materials, By-Products or Finished Products (page IV-4-16) of Reference (8).

Every effort will be made to store "material" under cover or indoors. When this is impossible material will be stored in designated areas. Building materials (gravel, lumber, sand, concrete, etc.) will be temporarily covered by plastic sheeting. The designated areas will be monitored by regular inspections for material that may be contributing to storm water pollution. This material will either be removed, or if pollution concerns remain, one of the following BMP treatment systems may need to be implemented:

- Oil/Water Separators
- Infiltration and filtration systems
- Detention systems
- Biofilters and vegetation swales

For additional guidance, refer to Volume III - Runoff Control of Reference (8).

4.2.7 Vegetation And Pest Management (S9.D.2.b.viii)

Herbicides, insecticides, and rodenticides are applied on-site. Management of their usage is regulated by the site environmental and facilities staff with only approved chemicals being applied by fully trained and licensed personnel. For additional guidance, refer to Section IV - 4.12 BMP S1.90 Vegetation Management/Integrated Pest Management (page IV-4-22) of Reference (8).

4.2.7.1 Site Management Plan

All pesticides, rodenticides, and herbicides will be managed as follows:

- All pesticides, rodenticides and herbicides that are used will comply with Intracompany Procedure RE-ADD-050, Pesticide Management.

- Pesticide, rodenticides, and herbicide applications will be performed in accordance with all applicable rules and regulations. All application of materials and placement of devices will be done to minimize storm water contamination.

- Considerations for spray, granular broadcast, and rodenticides device handling to prevent storm water contamination will include the following:

    1. container handling, storage, and transport,
    2. proper material and equipment for application,
    3. spray direction, wind velocity and direction,
    4. area of application and proximity to water bodies or conveyances,
    5. precipitation and weather forecast,
    6. empty container disposal,
    7. spill reporting,
    8. proper licensing of applicator, and
    9. rodenticides boxes will be placed to protect them from precipitation, and will be secured to prevent spillage.

4.2.8 Pollution Control At Construction Sites

Whenever construction activity occurs at this site, appropriate BMPs will be selected and implemented that address the particular nature and scope of the project. Where applicable, the following construction-oriented activities will have specific BMPs implemented in order to reduce storm water pollution risks.

- Handling petroleum products (Section 4.2.3),
- Solid waste handling and controls (Section 4.2.5),
- Handling hazardous products (Reference (5)),
- Equipment washing (Section 4.2.2),
- Spill control/clean-up (Section 4.1.4),
- Treatment and disposal of contaminated soils (appropriate hazardous waste regulations will be followed), and
- Concrete truck washing (washing and/or rinsing should occur away from ditches, catch basins, and wetlands).

4.3 Erosion and Sediment Control BMPs (S9.D.2.c)

Erosion and Sediment Control BMPs are intended to prevent erosion and sedimentation, such as preserving natural vegetation, seeding, mulching and matting, plastic covering, filter fences, and sediment traps and ponds.

4.3.1 Site Control Measures

There are few sediment and erosion concerns that are within the control of the Oxbow Corporate Park SWPPP. The following BMPs will be considered for all site construction work:

- Hay bales,
- Fabric fencing,
- Rip-rap,
- Sediment trapping using ponds,
- Permanent seeding,
- Stabilization and protection of disturbed areas as soon as possible, and
- Minimization of disturbed areas and duration of exposure.

4.4 Treatment BMPs (S9.D.3.a)

Treatment BMPs are intended to remove pollutants from storm water.

4.4.1 Oil/Water Separators

The Oxbow Corporate Park facility has two baffle-type oil/water separators. These are inspected and cleaned out on a regular basis.

4.5 Innovative BMPs (S9.D.3.b)

The following BMPs are specific to potential pollution concerns uncovered at the Oxbow Corporate Park facility. They address areas or processes not covered in regulatory guidance and documentation.

4.5.1 Tub Skids

Whenever tub skids are used for transportation or storage the following guidelines will apply:

- No leaking or leaching from tub skids will be allowed. If the contents of a tub skid could leak or leach, then plastic lining will be put in place and the tub skid covered after loading. Such tub skids will be maintained indoors, if possible, or transported off-site to their final destination as soon as possible. The use of lining and plastic covers will be allowed only on a temporary basis with no such long-term storage allowed due to the degradation of plastic liners and covers.

- Damaged or leaking tub skids will be removed from the system.

- Empty tub skids will be inspected for residual contents and cleaned by vacuum or rags if needed. No leaking or leaching of residual contents will be allowed.

- Empty tub skids will be stored indoors if possible. If stored outdoors, they will be turned on their side or inverted to minimize runoff. Tub skids will be held in central locations whenever possible to make their management and inspection easier.

- Tub skids will be randomly inspected on a regular basis to insure that proper practices are being followed.

4.5.2 Drain Covers

Magnetic drain covers or suitable substitute will be used extensively in the following areas when activities take place that may impact storm water:

- Transportation Corridors,
- Solid and Hazardous Waste Handling Areas, and
- Raw and Surplus Material Storage Areas.

4.5.3 Transportation

The following BMPs should be considered when dealing with potential storm water pollution from industrial transportation activities:

- Drain covers should be placed along "main" transportation corridors or carried along with drivers,
- Street sweeping,
- Identify "safe" (minimizing storm water impact) routes, and
- Signs identifying transportation corridor with associated storm water awareness information.

Note: Implementing BMPs from other sections of this document will also help transportation related issues. In addition, the implementation of other documents (Reference (1), (4), (5)) aids in minimizing spills.

4.5.3 Diesel Tank at 7-253 Building

Precautions when filling diesel tank at 7-253 Building:

1) Drains should be covered,
2) Delivery person should be instructed in proper response to overflow, and
3) Temporary container placed below filler.

4.5.4 Pollution Prevention Plans (per WAC 173-307)

The Boeing Defense and Space Group is committed to the implementation of selected hazardous substance and hazardous waste reduction opportunities and the achievement of stated reduction goals. Furthermore, when implementing the selected opportunities, risks will not be shifted from one part of a process, environmental medium or product to another.

Refer to *Oxbow Corporate Park Pollution Prevention Plan - Volume 1 of 2 and 2 of 2*, dated September 1, 1992.

4.6 BMP Implementation (S9.D.4)

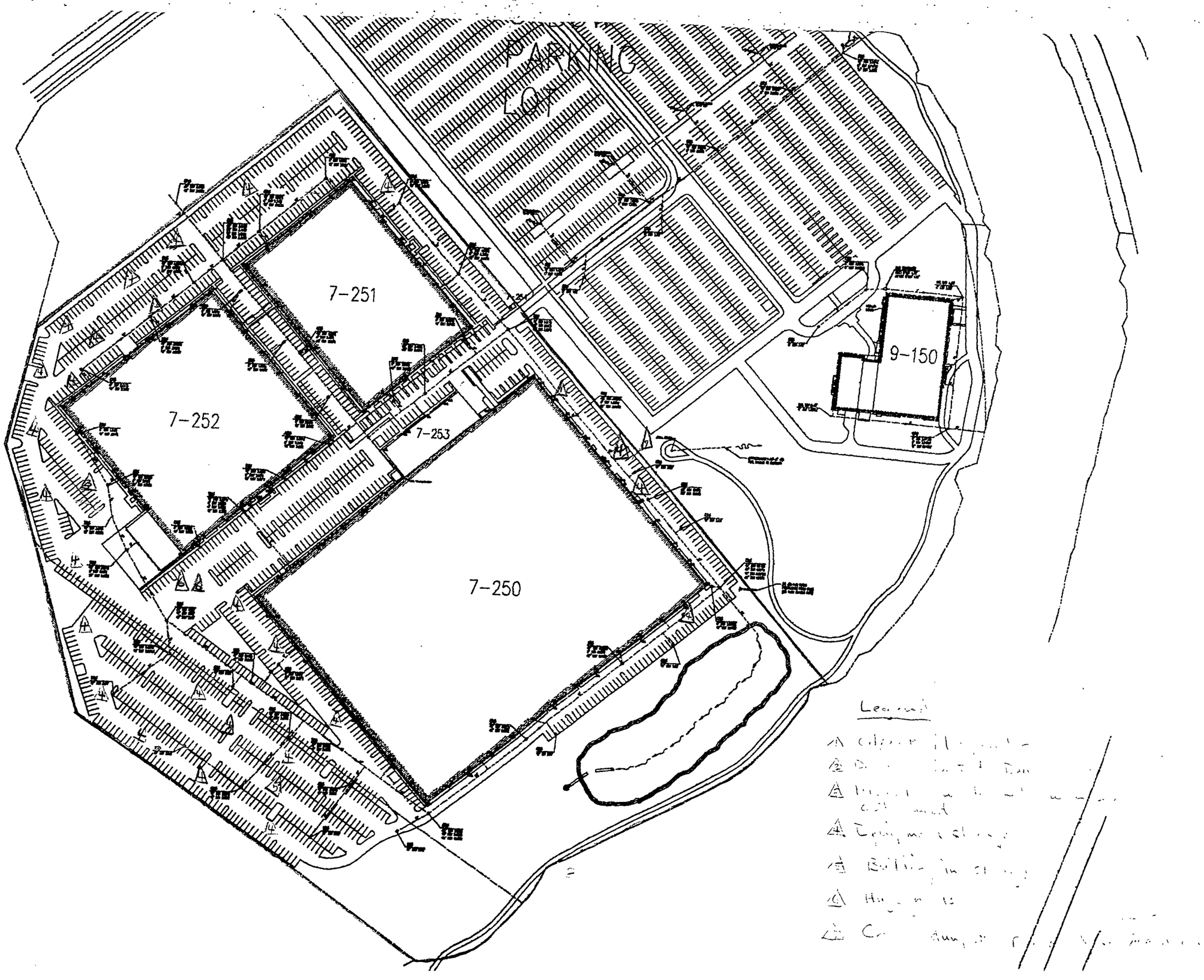
All Operational and Source Control BMPs, not involving capital expenditures, applicable to the Oxbow Corporate Park SWPPP will be implemented on or before November 18, 1994. All BMPs involving capital expenditures will be implemented on or before November 18, 1995.

APPENDIX A

OXBOW CORPORATE PARK SITE MAP

APPENDIX B

OXBOW CORPORATE PARK DRAINAGE BASINS


7-251
7-252
7-253
7-250
9-150

B-DUW2-209000

Boundaries of Publication — Oxbow Corporate Park

OXBOW CORPORATE PARK

31.41 ACRES (BD&SG)
~~2.30 ACRES (BSS)~~

99 WEST MARGINAL WAY SOUTH

7-04
7-05
BSS
LICENSED
TRANSPORTATION

7-252
7-250
7-251
7-253
7-254

RETENTION BASIN

UNINCORPORATED KING COUNTY
CITY OF TUKWILA

J-5

PARKING

9-401

EMPLOYEE
ACTIVITY
CENTER

9-150

OXBOW
BRIDGE

S 104TH STREET

S 102ND STREET

PACIFIC HIGHWAY SOUTH

DUWAMISH RIVER

EAST MARGINAL WAY SOUTH

Site boundary
Storm water drainage
Outfall

DUWAMISH CORRIDOR
SEATTLE/TUKWILA, WA

0 1,500 FT
SCALE

SEATTLE TACOMA INTERNATIONAL AIRPORT

EAST MARGINAL WAY CORPORATE PARK

OXBOW CORPORATE PARK

DUWAMISH OFFICE PARK
CUSTOMER SERVICES CENTER

GATEWAY

★ BOEING EMPLOYEES' CREDIT UNION

RENTON KENT AND SOUTHCENTER AREA

DEVELOPMENTAL CENTER

MILITARY FLIGHT CENTER

SOUTH PARK

PLANT 2

NORTH BOEING FIELD

BOEING FIELD (10 000-FT RUNWAY)

HELIPAD

W MARGINAL WAY SOUTH

E MARGINAL WAY SOUTH

AIRPORT WAY

I 5 FREEWAY

BOEING ACCESS ROAD

1ST AVE S

DUWAMISH WATERWAY

SEATTLE AND EVERETT

★ MUSEUM OF FLIGHT

THOMPSON SITE

★ FAA TOWER

MEDICAL FACILITY

★ AIRPORT TERMINAL

CORPORATE HEADQUARTERS

LOBBY

FLIGHT TEST

POWER PLANT TEST SITE

LEGEND
★ NON BOEING PROPERTY
☐ BOEING-OCCUPIED PROPERTY
⬚ PLANNED OR UNDER CONSTRUCTION

APPENDIX C

STORM WATER DISCHARGE ASSESSMENT AND CERTIFICATION

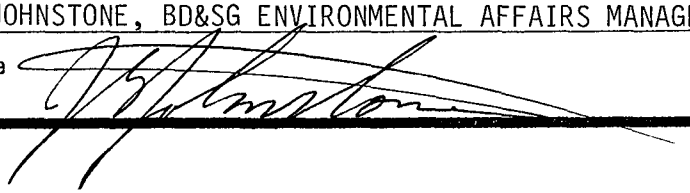
NON-STORM WATER DISCHARGE ASSESSMENT AND CERTIFICATION

Completed by: PETER WEICKMANN
Title: BD&SG WATER FOCAL
Date: 11/13/93

Date of Test or Evaluation	Outfall Directly Observed During the Test (identify as indicated on the site map)	Method Used to Test or Evaluate Discharge	Describe Results from Test for the Presence of Non-Storm Water Discharge	Identify Potential Significant Sources	Name of Person Who Conducted the Test or Evaluation
12/28/92-02/19/93	OF-OX-01	VISUAL	NON-OBSERVED	N/A	J. GORANOWSKI C. CASPERSON
12/28/92-02/19/93	OF-OX-02	VISUAL	NON-OBSERVED	N/A	J. GORANOWSKI C. CASPERSON
12/28/92-02/19/93	OF-OX-03	VISUAL	NON-OBSERVED	N/A	J. GORANOWSKI C. CASPERSON
12/28/92-02/19/93	OF-OX-04	VISUAL	NON-OBSERVED	N/A	J. GORANOWSKI C. CASPERSON
12/28/92-02/19/93	OF-OX-05	VISUAL	NON-OBSERVED	N/A	J. GORANOWSKI C. CASPERSON
12/28/92-02/19/93	OF-OX-06	VISUAL	MINIMAL	COOLING TOWER OVERFLOW	J. GORANOWSKI C. CASPERSON

CERTIFICATION

I, J. T. JOHNSTONE *(responsible corporate official), certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

A. Name & Official Title (type or print)	B. Area Code and Telephone No.
J. T. JOHNSTONE, BD&SG ENVIRONMENTAL AFFAIRS MANAGER	(206) 544-1230
C. Signature 	D. Date Signed 11/16/93

APPENDIX D

SPILL HISTORY

The following is a list of spills that can be identified as having occurred at the Oxbow Corporate Park facility for the period January 1, 1989, through the present. Those spills identified with an asterisk were reported to the appropriate local, state or federal agencies.

1989

No spills

1990

No spills

1991

3/28/91:	165 gallons sulfuric acid, inside 7-252 Building
4/4/91:	10-15 gallons hydraulic fluid, inside 7-250 Building
6/6/91:	ethylene glycol, indoors
6/17/91:	* 70 gallons photo developing rinse water, inside 7-250 Building
6/26/91:	1 pint overflow battery acid, inside 7-250 Building
7/15/91:	1 ounce brake fluid, in parking lot
7/25/91:	2 gallons battery acid, inside 7-250 Building

1992

5/8/92:	* 2 gallons ethylene glycol mixture, inside 7-253 Building, released to sanitary sewer
6/9/92:	* 2.5 gallons hydraulic fluid, inside 7-253 Building, .5 pints released to sanitary sewer

1993

2/8/93:	* 2 gallons gasoline from car, in parking lot
3/25/93:	2 quarts power steering fluid, in parking lot
7/2/93	1 pint power steering fluid, in parking lot

APPENDIX E

CERCLA CHEMICALS

Cas	Chem_name	Category	Cas_use_lb
Site OX			
100-41-4	ETHYL BENZENE		3
108-88-3	TOLUENE		2821
1330-20-7	XYLENE		14
71-43-2	BENZENE		0
71-55-6	METHYL CHLOROFORM	R-ODC	11
7664-41-7	AMMONIA		448
79-01-6	TRICHLOROETHYLENE		0

SECTION 313 WATER PRIORITY CHEMICALS
CERCLA CHEMICALS 1992

Cas	Chem_name	Form_r	Sara_313	Category	Cas_use_lb
Site OX					
100-41-4	ETHYL BENZENE				10
100-42-5	STYRENE				43
108-88-3	TOLUENE				1879
108-90-7	CHLOROBENZENE				1
117-81-7	BIS(2-ETHYL HEXYL)PHTHALATE				3
131-11-3	DIMETHYL PHTHALATE				3
1330-20-7	XYLENE				367
71-43-2	BENZENE				1
71-55-6	METHYL CHLOROFORM				144
7429-90-5	ALUMINUM				10
7439-92-1	LEAD				1
7440-22-4	SILVER				2
7440-43-9	CADMIUM				7
7440-50-8	COPPER				1
7440-66-6	ZINC				2
7697-37-2	NITRIC ACID				7
7782-49-2	SELENIUM				2
7789-06-2	STRONTIUM CHROMATE				15
79-01-6	TRICHLOROETHYLENE				1
84-74-2	DIBUTYL PHTHALATE				14
85-68-7	BUTYL BENZYL PHTHALATE				6
91-20-3	NAPHTHALENE				1

APPENDIX F

BI-ANNUAL INSPECTION REPORT

Stored in separate file
Dan Barnes

BI-ANNUAL INSPECTION REPORT

BD&SG SITE

SCOPE OF INSPECTION

PERSONNEL INVOLVED

DATE(S)

MAJOR OBSERVATIONS

ACTIONS TAKEN AND RESPONSIBILITY

SIGNATURE OF RESPONSIBLE OFFICIAL

_____

ACTIVE PAGE RECORD

PAGE NO.	REV LTR	ADDED PAGES				PAGE NO.	REV LTR	ADDED PAGES			
		PAGE NO.	REV LTR	PAGE NO.	REV LTR			PAGE NO.	REV LTR	PAGE NO.	REV LTR
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